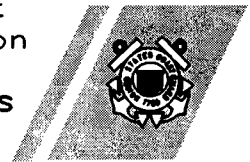


U.S. Department  
of Transportation

United States  
Coast Guard



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# Guide for Administration of Merchant Marine Engineering Examination (Engineering Guide)

**July  
1994**

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This publication provides guidance for examination room proctors  
and other personnel who actively monitor applicants in the exam room.

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Subj: GUIDE FOR ADMINISTRATION OF MERCHANT MARINE ENGINEERING  
EXAMINATIONS (ENGINEERING GUIDE)

1. PURPOSE. This manual provides guidance for examination room proctors and other personnel who actively monitor merchant marine applicants in the exam room.
2. DISCUSSION.
  - a. The engineering examination system for lower level licenses has been revised to incorporate recommendations from the report, LICENSING 2000 AND BEYOND.
  - b. The examination structure guidelines (ESG) contained in this manual are effective as new examinations for each license are distributed. The corresponding ESG in the previous Engineering Guide will no longer be effective. The effective ESG's and those that are superseded will be indicated in the distribution letter of the new examination modules.
3. PROCEDURE.
  - a. This publication is to be used in conjunction with the previous Engineering Guide dated July 1992 until all of the new examinations are distributed. The distribution letters of new examination modules will contain information about which pages of this publication are effective.

DISTRIBUTION - SDL No. 132

|   | a | b | c | d | e | f | g | h | i | j | k | l | m | n  | o | p | q | r | s | t | u | v | w | x | y | z |
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| A |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |
| B |   |   |   |   |   |   |   |   |   |   |   |   |   | 50 |   |   |   |   |   |   |   |   |   |   |   |   |
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| D |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |
| E |   |   |   |   |   |   |   |   |   |   |   |   |   | *  |   |   |   |   |   |   |   |   |   |   |   |   |
| F |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |
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| H |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |

NON-STANDARD DISTRIBUTION: (See page 2.)

- b. The ESG's contain detailed information for each license exam. Consult the EGS's for unique directions and presentation order of examination modules.
4. PROCUREMENT INFORMATION. Regional Examination Centers will be provided with an initial supply of this publication. Replacement and additional copies are available from Commandant (G-MVP-5), (202) 267-2705.



J. C. CARD  
REAR ADMIRAL, U.S. COAST GUARD  
CHIEF, OFFICE OF MARINE SAFETY,  
SECURITY AND ENVIRONMENTAL  
PROTECTION

NON-STANDARD DISTRIBUTION:

- C:e Boston, Baltimore, Miami, Toledo, San Francisco, Honolulu, New Orleans, Memphis, St. Louis, Hampton Roads, Charleston, San Juan, Long Beach, Portland OR, Anchorage, Juneau, Puget Sound, Houston, Norfolk, Guam (2) (Only).
- C:m New York (3) (Only).
- E:n Ketchikan (2) (Only).

## INTRODUCTION

This publication has been designed primarily for the use of examination room proctors and other personnel who are actively engaged in overseeing applicants in the exam room. Any questions concerning the Engineering Examinations should be referred to Coast Guard Headquarters, Merchant Marine Examination Branch, Engineering Section, 202/267-2714.



1. The first part of the document is a list of the names of the members of the committee who have been appointed to study the problem of the shortage of housing in the city of New York.



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## Instructions

1. The Engineering Guide is divided into four parts. Each part contains an introduction and the exam structure guidelines for all examinations referred to in the part. In addition, the parts for the upper and lower level licenses also contain an index to the exams within the part and a quick reference sheet.
2. The introduction lists general policy applicable to all of the license exams referred to within each part.
3. The index lists all of the exam structure guidelines within the part of the Engineering Guide and the number of the exam structure guide applicable to a particular examination.
4. The quick reference sheet shows at a glance the number of modules within each exam. It allows a quick comparison of the total number of modules required to test an applicant at each license level.
5. Specific policy applicable to a particular license examination is contained on the applicable exam structure guide.
6. Module codes are a five digit number that specifically identify a module. The first digit specifies the license area of the exam; i.e., 5XXXX, upper level licenses; 6XXXX, lower level licenses; and 8XXXX, QMED ratings. The second digit specifies the level of the exam, such as 50XXX, Upper Level, Chief Engineer, unlimited horsepower. The third digit specifies the subject area, such as 504XX, upper level, Chief Engineer, unlimited horsepower, electricity. The last two digits refer to versions and forms of the exam module, which vary with each module edition and are indicated by "--" in the exam structure guide.



## SUMMARY OF MODULES

### PART ONE - UNLIMITED HORSEPOWER ENGINEERING LICENSES

| <u>MODULE CODE</u> | <u>MODULE NAME</u>   |
|--------------------|--|
| 50XXX .....        | UNLIMITED CHIEF ENGINEER                                       |
| 51XXX .....        | UNLIMITED FIRST ASSISTANT ENGINEER                             |
| 52XXX .....        | UNLIMITED SECOND ASSISTANT ENGINEER                            |
| 53XXX .....        | UNLIMITED THIRD ASSISTANT ENGINEER                             |
| 54XXX .....        | UNLIMITED CHIEF/FIRST ASSISTANT ENGINEER, ORIGINAL/ENDORSEMENT |
| 55XXX .....        | UNLIMITED ENGINEERING LICENSES, RENEWAL EXERCISE               |

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### PART TWO - LIMITED ENGINEERING LICENSES

| <u>MODULE CODE</u> | <u>MODULE NAME</u>  |
|--------------------|---|
| 60XXX .....        | LIMITED CHIEF   |
| 61XXX .....        | LIMITED ENGINEERING LICENSE, RENEWAL EXERCISE                 |
| 65XXX .....        | UNINSPECTED FISHING VESSEL, CHIEF/ASSISTANT ENGINEER          |
| 68XXX .....        | LIMITED ASSISTANT ENGINEER/DESIGNATED DUTY ENGINEER, UNLTD HP |
| 69XXX .....        | DESIGNATED DUTY ENGINEER, LIMITED HORSEPOWER                  |

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### PART THREE - MODU

| <u>MODULE CODE</u> | <u>MODULE NAME</u>                         |
|--------------------|--|
| 62XXX .....        | MODU CHIEF/ASSISTANT ENGINEER              |
| 63XXX .....        | MODU LIMITED ENGINEERING, RENEWAL EXERCISE |

---

### PART FOUR - UNLICENSED RATINGS

| <u>MODULE CODE</u> | <u>MODULE NAME</u>     |
|--------------------|------------------------|
| 80XXX .....        | GENERAL SAFETY         |
| 81XXX .....        | JUNIOR ENGINEER        |
| 82XXX .....        | DECK ENGINEER          |
| 83XXX .....        | ELECTRICIAN            |
| 84XXX .....        | REFRIGERATION ENGINEER |
| 85XXX .....        | MACHINIST              |
| 86XXX .....        | FIREMAN/WATERTENDER    |
| 87XXX .....        | OILER                  |
| 88XXX .....        | PUMPMAN                |
| 89XXX .....        | OILER, MINERAL & OIL   |
| 90XXX .....        | QMED RENEWAL EXERCISE  |



PART ONE

UNLIMITED  
ENGINEERING LICENSE EXAMINATIONS

CHIEF ENGINEER

FIRST ASSISTANT ENGINEER

SECOND ASSISTANT ENGINEER

THIRD ASSISTANT ENGINEER



## INTRODUCTION

### UPPER LEVEL - UNLIMITED HORSEPOWER - ENGINEERING EXAMINATIONS

#### 1. TIME OF EXAMINATION AND GRADING POLICY

There is no maximum time limit on any module except as necessary to accommodate the working hours of the examination room. Applicants starting to test in the morning, at the opening of the exam room, must complete a minimum of two modules that day when two or more modules in an exam series are to be administered. If they desire, and time permits, they may complete more than the required minimum of two modules. Applicants starting a module late in the afternoon should be advised that it must be completed by the normal closing time; unanswered questions will be treated as wrong answers. An applicant for an unlimited license must complete the entire exam on consecutive workdays for which they have applied. Modules should be administered in the published order. A minimum score of 70% is required to pass all modules, except for the renewal module. The renewal module requires a minimum score of 90% to pass. All modules for engineers are graded separately.

#### 2. EXAMINATION CYCLES

Subject to the requirements of paragraph 1, the examination cycle may begin on any workday, and at anytime during the day as designated by the SIP.

#### 3. REFERENCE MATERIAL

Applicants are permitted to use the Merchant Marine Engineering Examination Illustration Book, 46 CFR Parts 1-199 and 33 CFR Parts 1-199. These must be provided in the examination room. No other reference materials are permitted. Nonprogrammable calculators are permitted.

#### 4. INCREASING THE SCOPE OF PROPULSION MODE FOR CHIEF, FIRST, SECOND AND THIRD ASSISTANT ENGINEERS

Applicants wishing to increase the scope of their propulsion mode are required to be tested with two modules in the new propulsion area. For Chief and First Assistant Engineer these modules are titled as Motor Plants (506--, 516--) and Original/Endorsement Motor Plants Part II (547--); or Steam Plants, (503--, 513--), and Original/Endorsement Steam Plants Part II (545--). For Second Assistant Engineer these modules are titled as Motor Plants, Part I (521--) and Motor Plants, Part II (522--); or Steam Plants, Part I (526--), and Steam Plants, Part II (527--). For Third Assistant Engineer these modules are titled as Motor Plants, Part I (531--) and Motor Plants, Part II (532--); or Steam Plants, Part I (537--), and Steam Plants, Part II (538--).



5. RENEWAL EXERCISE

The renewal exercises for Chief, First, Second, and Third Assistant Engineers have been consolidated into one exercise.

6. QUESTIONS

Any questions should be referred to Coast Guard Headquarters, Merchant Marine Examination Branch, Engineering Section, 202/267-2714.



**EXAMINATION STRUCTURE GUIDELINE INDEX**

**FOR**

**UNLIMITED HORSEPOWER ENGINEERING LICENSES**

| <b>EXAM TITLE</b>   | <b>Raise in Grade</b> | <b>ESG</b> |
|---|-----------------------|------------|
| Chief Engineer, Motor .....   |                       | 1          |
| Chief Engineer, Steam .....   |                       | 2          |
| Chief Engineer, Steam and Motor .....                                     |                       | 3          |
| <b>Original</b>   |                       |            |
| Chief Engineer, Motor .....   |                       | 4          |
| Chief Engineer, Steam .....   |                       | 5          |
| Chief Engineer, Steam and Motor .....                                     |                       | 6          |
| <b>Raise in Grade</b>   |                       |            |
| First Assistant Engineer, Motor .....                                     |                       | 7          |
| First Assistant Engineer, Steam .....                                     |                       | 8          |
| First Assistant Engineer, Steam & Motor .....                             |                       | 9          |
| <b>Original</b>   |                       |            |
| First Assistant Engineer, Motor .....                                     |                       | 10         |
| First Assistant Engineer, Steam .....                                     |                       | 11         |
| First Assistant Engineer, Steam & Motor .....                             |                       | 12         |
| <b>Raise in Grade</b>   |                       |            |
| Second Assistant Engineer, Motor .....                                    |                       | 13         |
| Second Assistant Engineer, Steam .....                                    |                       | 14         |
| Second Assistant Engineer, Steam & Motor .....                            |                       | 15         |
| <b>Original</b>   |                       |            |
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# QUICK REFERENCE - UNLIMITED HORSEPOWER LICENSES

## CHIEF ENGINEER

| <u>SUBJECT</u>            | <u>MODULE<br/>CODE</u> | <u>STEAM<br/>ONLY</u> | <u>MOTOR<br/>ONLY</u> | <u>STEAM &amp;<br/>MOTOR</u> |
|---------------------------|------------------------|-----------------------|-----------------------|------------------------------|
| General Subjects, Part I  | 501--                  | X                     | X                     | X                            |
| General Subjects, Part II | 502--                  | X                     | X                     | X                            |
| Steam Plants              | 503--                  | *X                    |                       | X                            |
| Electricity               | 504--                  | X                     | X                     | X                            |
| Engineering Safety        | 505--                  | X                     | X                     | X                            |
| Motor Plants              | 506--                  |                       | *X                    | X                            |
| O/E Steam Plants, Part II | 545--                  | *@                    |                       | X                            |
| O/E Motor Plants, Part II | 547--                  |                       | *@                    | X                            |

## FIRST ASSISTANT ENGINEER

| <u>SUBJECT</u>            | <u>MODULE<br/>CODE</u> | <u>STEAM<br/>ONLY</u> | <u>MOTOR<br/>ONLY</u> | <u>STEAM &amp;<br/>MOTOR</u> |
|---------------------------|------------------------|-----------------------|-----------------------|------------------------------|
| General Subjects, Part I  | 511--                  | X                     | X                     | X                            |
| General Subjects, Part II | 512--                  | X                     | X                     | X                            |
| Steam Plants              | 513--                  | *X                    |                       | X                            |
| Electricity               | 514--                  | X                     | X                     | X                            |
| Engineering Safety        | 515--                  | X                     | X                     | X                            |
| Motor Plants              | 516--                  |                       | *X                    | X                            |
| O/E Steam Plants, Part II | 545--                  | *@                    |                       | X                            |
| O/E Motor Plants, Part II | 547--                  |                       | *@                    | X                            |

## SECOND ASSISTANT ENGINEER

| <u>SUBJECT</u>        | <u>MODULE<br/>CODE</u> | <u>STEAM<br/>ONLY</u> | <u>MOTOR<br/>ONLY</u> | <u>STEAM &amp;<br/>MOTOR</u> |
|-----------------------|------------------------|-----------------------|-----------------------|------------------------------|
| Motor Plants, Part I  | 521--                  |                       | *X                    | X                            |
| Motor Plants, Part II | 522--                  |                       | +*X                   | +X                           |
| General Subjects      | 523--                  | X                     | X                     | X                            |
| Electricity           | 524--                  | X                     | X                     | X                            |
| Engineering Safety    | 525--                  | X                     | X                     | X                            |
| Steam Plants, Part I  | 526--                  | *X                    |                       | +X                           |
| Steam Plants, Part II | 527--                  | *X                    |                       | +X                           |

## THIRD ASSISTANT ENGINEER

| <u>SUBJECT</u>        | <u>MODULE<br/>CODE</u> | <u>STEAM<br/>ONLY</u> | <u>MOTOR<br/>ONLY</u> | <u>STEAM &amp;<br/>MOTOR</u> |
|-----------------------|------------------------|-----------------------|-----------------------|------------------------------|
| Motor Plants, Part I  | 531--                  |                       | *X                    | X                            |
| Motor Plants, Part II | 532--                  |                       | *X                    | X                            |
| Engineering Safety    | 533--                  | X                     | X                     | X                            |
| General Subjects      | 535--                  | X                     | X                     | X                            |
| Electricity           | 536--                  | X                     | X                     | X                            |
| Steam Plants, Part I  | 537--                  | *X                    |                       | X                            |
| Steam Plants, Part II | 538--                  | *X                    |                       | X                            |

X Indicates a module that is part of the core exam.

\* An applicant increasing the scope of a license is only required to pass these modules.

@ An applicant for an original license must also test with these modules.



EXAM STRUCTURE GUIDELINE #1  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited Chief Engineer, Steam

NO. OF MODULES: Five (5)

MODULE PRESENTATION ORDER:

501-- , General Subjects, Part I  
502-- , General Subjects, Part II  
503-- , Steam Plants  
504-- , Electricity  
505-- , Engineering Safety

---

EXAM STRUCTURE GUIDELINE #2  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited Chief Engineer, Motor

NO. OF MODULES: Five (5)

MODULE PRESENTATION ORDER:

501-- , General Subjects, Part I  
502-- , General Subjects, Part II  
504-- , Electricity  
505-- , Engineering Safety  
506-- , Motor Plants

---

EXAM STRUCTURE GUIDELINE #3  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited Chief Engineer, Steam and Motor

NO. OF MODULES: Six (6)

MODULE PRESENTATION ORDER:

501-- , General Subjects, Part I  
502-- , General Subjects, Part II  
503-- , Steam Plants  
504-- , Electricity  
505-- , Engineering Safety  
506-- , Motor Plants



EXAM STRUCTURE GUIDELINE #4  
FOR  
UNLIMITED LICENSES

EXAM TITLE: ORIGINAL Unlimited Chief Engineer, Steam

NO. OF MODULES: Six (6)

MODULE PRESENTATION ORDER:

501-- , General Subjects, Part I  
502-- , General Subjects, Part II  
503-- , Steam Plants  
504-- , Electricity  
505-- , Engineering Safety  
545-- , Original/Endorsement Steam Plants, Part II

REMARKS:

1. Only one copy of each of the ORIGINAL/ENDORSEMENT modules (545-- , 547-- ) will be provided through standard distribution. Additional copies must be requested.

-----

EXAM STRUCTURE GUIDELINE #5  
FOR  
UNLIMITED LICENSES

EXAM TITLE: ORIGINAL Unlimited Chief Engineer, Motor

NO. OF MODULES: Six (6)

MODULE PRESENTATION ORDER:

501-- , General Subjects, Part I  
502-- , General Subjects, Part II  
504-- , Electricity  
505-- , Engineering Safety  
506-- , Motor Plants  
547-- , Original/Endorsement Motor Plants, Part II

-----

EXAM STRUCTURE GUIDELINE #6  
FOR  
UNLIMITED LICENSES

EXAM TITLE: ORIGINAL Unlimited Chief Engineer, Steam & Motor

NO. OF MODULES: Eight (8)

MODULE PRESENTATION ORDER:

501-- , General Subjects, Part I  
502-- , General Subjects, Part II  
503-- , Steam Plants  
504-- , Electricity  
505-- , Engineering Safety  
506-- , Motor Plants  
545-- , Original/Endorsement Steam Plants, Part II  
547-- , Original/Endorsement Motor Plants, Part II



EXAM STRUCTURE GUIDELINE #7  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited First Assistant Engineer, Steam

NO. OF MODULES: Five (5)

MODULE PRESENTATION ORDER

511-- , General Subjects, Part I  
512-- , General Subjects, Part II  
513-- , Steam Plants  
514-- , Electricity  
515-- , Engineering Safety

---

EXAM STRUCTURE GUIDELINE #8  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited First Assistant Engineer, Motor

NO. OF MODULES: Five (5)

MODULE PRESENTATION ORDER:

511-- , General Subjects, Part I  
512-- , General Subjects, Part II  
514-- , Electricity  
515-- , Engineering Safety  
516-- , Motor Plants

---

EXAM STRUCTURE GUIDELINE #9  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited First Assistant Engineer, Steam &  
Motor

NO. OF MODULES: Six (6)

MODULE PRESENTATION ORDER:

511-- , General Subjects, Part I  
512-- , General Subjects, Part II  
513-- , Steam Plants  
514-- , Electricity  
515-- , Engineering Safety  
516-- , Motor Plants



EXAM STRUCTURE GUIDELINE #10  
FOR  
UNLIMITED LICENSES

EXAM TITLE: ORIGINAL Unlimited First Assistant Engineer, Steam

NO. OF MODULES: Six (6)

MODULE PRESENTATION ORDER:

511-- , General Subjects, Part I  
512-- , General Subjects, Part II  
513-- , Steam Plants  
514-- , Electricity  
515-- , Engineering Safety  
545-- , Original/Endorsement Steam Plants, Part II

REMARKS:

1. Only one copy each of the ORIGINAL/ENDORSEMENT modules (545-- , 547-- ) will be provided through standard distribution. Additional copies must be requested.

-----

EXAM STRUCTURE GUIDELINE #11  
FOR  
UNLIMITED LICENSES

EXAM TITLE: ORIGINAL Unlimited First Assistant Engineer, Motor

NO. OF MODULES: Six (6)

MODULE PRESENTATION ORDER:

511-- , General Subjects, Part I  
512-- , General Subjects, Part II  
514-- , Electricity  
515-- , Engineering Safety  
516-- , Motor Plants  
547-- , Original/Endorsement Motor Plants, Part II

-----

EXAM STRUCTURE GUIDELINE #12  
FOR  
UNLIMITED LICENSES

EXAM TITLE: ORIGINAL Unlimited First Assistant Engineer, Steam & Motor

NO. OF MODULES: Eight (8)

MODULE PRESENTATION ORDER:

511-- , General Subjects, Part I  
512-- , General Subjects, Part II  
513-- , Steam Plants  
514-- , Electricity  
515-- , Engineering Safety  
516-- , Motor Plants  
545-- , Original/Endorsement Steam Plants, Part II  
547-- , Original/Endorsement Motor Plants, Part II



**EXAM STRUCTURE GUIDELINE #13  
FOR  
UNLIMITED LICENSES**

**EXAM TITLE:** Raise In Grade To Unlimited Second Assistant Engineer, Steam

**NO. OF MODULES:** Five (5)

**MODULE PRESENTATION ORDER:**

523-- , General Subjects  
524-- , Electricity  
525-- , Engineering Safety  
526-- , Steam Plants, Part I  
527-- , Steam Plants, Part II

---

**EXAM STRUCTURE GUIDELINE #14  
FOR  
UNLIMITED LICENSES**

**EXAM TITLE:** Raise In Grade To Unlimited Second Assistant Engineer, Motor

**NO. OF MODULES:** Five (5)

**MODULE PRESENTATION ORDER:**

521-- , Motor Plants, Part I  
522-- , Motor Plants, Part II  
523-- , General Subjects  
524-- , Electricity  
525-- , Engineering Safety

---

**EXAM STRUCTURE GUIDELINE #15  
FOR  
UNLIMITED LICENSES**

**EXAM TITLE:** Raise In Grade To Unlimited Second Assistant Engineer, Steam &  
Motor

**NO. OF MODULES:** Seven (7)

**MODULE PRESENTATION ORDER:**

521-- , Motor Plants, Part I  
522-- , Motor Plants, Part II  
523-- , General Subjects  
524-- , Electricity  
525-- , Engineering Safety  
526-- , Steam Plants, Part I  
527-- , Steam Plants, Part II



EXAM STRUCTURE SHEET #16  
FOR  
UNLIMITED LICENSES

EXAM TITLE: ORIGINAL Unlimited Second Assistant Engineer, Steam & Third  
Assistant Engineer, Motor

NO. OF MODULES: Seven (7)

MODULE PRESENTATION ORDER:

523-- , General Subjects  
524-- , Electricity  
525-- , Engineering Safety  
526-- , Steam Plants, Part I  
527-- , Steam Plants, Part II  
531-- , 3rd A/E Motor Plants, Part I  
532-- , 3rd A/E Motor Plants, Part II

---

EXAM STRUCTURE SHEET #17  
FOR  
UNLIMITED LICENSES

EXAM TITLE: ORIGINAL Unlimited Second Assistant Engineer, Motor & Third  
Assistant Engineer, Steam

NO. OF MODULES: Seven (7)

MODULE PRESENTATION ORDER:

521-- , Motor Plants, Part I  
522-- , Motor Plants, Part II  
525-- , Engineering Safety  
523-- , General Subjects  
524-- , Electricity  
537-- , 3rd A/E Steam Plants, Part I  
538-- , 3rd A/E Steam Plants, Part II



EXAM STRUCTURE GUIDELINE #18  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Unlimited Third Assistant Engineer, Steam

NO. OF MODULES: Five (5)

MODULE PRESENTATION ORDER

533-- , Engineering Safety  
535-- , General Subjects  
536-- , Electricity  
537-- , Steam Plants, Part I  
538-- , Steam Plants, Part II

---

EXAM STRUCTURE GUIDELINE #19  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Unlimited Third Assistant Engineer, Motor

NO. OF MODULES: Five (5)

MODULE PRESENTATION ORDER:

531-- , Motor Plants, Part I  
532-- , Motor Plants, Part II  
533-- , Engineering Safety  
535-- , General Subjects  
536-- , Electricity

---

EXAM STRUCTURE GUIDELINE #20  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Unlimited Third Assistant Engineer, Steam & Motor

NO. OF MODULES: Seven (7)

MODULE PRESENTATION ORDER:

531-- , Motor Plants, Part I  
532-- , Motor Plants, Part II  
533-- , Engineering Safety\*  
535-- , General Subjects  
536-- , Electricity  
537-- , Steam Plants, Part I  
538-- , Steam Plants, Part II

\*Note: Applicants qualified to examine simultaneously for Third Mate and Unlimited Third Assistant Engineer are not required to complete this module.



EXAM STRUCTURE GUIDELINE #21  
FOR  
UNLIMITED LICENSES

EXAM TITLE: RENEWAL EXERCISE - UNLIMITED ENGINEER - STEAM AND/OR MOTOR.

NO. OF MODULES: One (1); 551-- Unlimited Engineer - Renewal Exercise.

GRADING POLICY: The minimum passing score is 90%.

REMARKS:

1. The renewal exercise is open book.
2. All Unlimited Horsepower License applicants use the same renewal exercise. Steam applicants will answer questions 1 through 50. Motor applicants will answer questions 1 through 30 and 51 through 70. Steam and Motor applicants will answer all 70 questions.
3. Applicants should be given one attempt to correct missed questions. If unsuccessful at obtaining a passing score after reviewing the missed questions, the applicant should be given a different version of the exercise and the process repeated.
4. If the applicant is unsuccessful at obtaining a passing score after being given the second version, the applicant should retest after three months following the applicable examination fee.
5. Unlimited Horsepower License applicants may complete the exercise by mail.

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EXAM STRUCTURE GUIDELINE #22  
FOR  
UNLIMITED LICENSES

INCREASING THE SCOPE OF AN EXISTING ENGINEER'S LICENSE IN EITHER THE STEAM OR MOTOR PROPULSION MODE

This sheet is for applicants who wish to increase the scope of their existing Steam or Motor license by obtaining a Motor or Steam endorsement respectively. Applicants are required to be examined with two modules for the propulsion grade they are applying, as listed below.

NO. OF MODULES: Two (2)

EXAMPLE:

Chief Engineer Motor increasing scope to Chief Engineer Steam and Motor.

Modules Required: 503-- Steam Plants  
545-- Original/Endorsement Steam Plants Part II

Chief Engineer Steam increasing scope to Chief Engineer Steam and Motor.

Modules Required: 506-- Motor Plants  
547-- Original/Endorsement Motor Plants Part II

CONTINUED ON NEXT PAGE



CONTINUATION  
EXAM STRUCTURE GUIDELINE #22  
FOR  
UNLIMITED LICENSES

First Assistant Engineer Motor increasing scope to First Assistant Engineer Steam and Motor.

Modules Required: 513-- Steam Plants  
545-- Original/Endorsement Steam Plants Part II

First Assistant Engineer Steam increasing scope to First Assistant Engineer Steam and Motor.

Modules Required: 516-- Motor Plants  
547-- Original/Endorsement Motor Plants Part II

Second Assistant Engineer Motor increasing scope to Second Assistant Engineer Steam and Motor.

Modules Required: 526-- , Steam Plants, Part I  
527-- , Steam Plants, Part II

Second Assistant Engineer Steam increasing scope to Second Assistant Engineer Steam and Motor.

Modules Required: 521-- , Motor Plants, Part I  
522-- , Motor Plants, Part II

Third Assistant Engineer Motor increasing scope to Third Assistant Engineer Steam and Motor.

Modules Required: 537-- , Steam Plants, Part I  
538-- , Steam Plants, Part II

Third Assistant Engineer Steam increasing scope to Third Assistant Engineer Steam and Motor.

Modules Required: 531-- , Motor Plants, Part I  
532-- , Motor Plants, Part II

REMARKS:

1. Applicants for an increase in scope are required to complete both of the required modules in one day.



EXAM STRUCTURE GUIDELINE #23  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited Second Assistant Engineer, Motor from  
Limited Chief Engineer, Motor

NO. OF MODULES: Two (2)

MODULE PRESENTATION ORDER:

522--, Motor Plants, Part II  
524--, Electricity

---

EXAM STRUCTURE GUIDELINE #24  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited Second Assistant Engineer, Steam from  
Limited Chief Engineer, Steam

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

524--, Electricity  
526--, Steam Plants, Part I  
527--, Steam Plants, Part II

---

EXAM STRUCTURE GUIDELINE #25  
FOR  
UNLIMITED LICENSES

EXAM TITLE: Raise In Grade To Unlimited Second Assistant Engineer, Steam &  
Motor, from Limited Chief Engineer, Steam and Motor

NO. OF MODULES: Four (4)

MODULE PRESENTATION ORDER:

522--, Motor Plants, Part II  
524--, Electricity  
526--, Steam Plants, Part I  
527--, Steam Plants, Part II



PART TWO

LIMITED

ENGINEERING LICENSE EXAMINATIONS

LIMITED CHIEF AND ASSISTANT ENGINEER

DESIGNATED DUTY UNLIMITED AND  
LIMITED ENGINEER

FISHING INDUSTRY VESSEL CHIEF AND  
ASSISTANT ENGINEER



## INTRODUCTION

### LIMITED HORSEPOWER ENGINEERING EXAMINATIONS

#### 1. OVERVIEW

Only the motor modes for the limited license examinations will be made available to the REC's. If a steam mode is necessary, contact the Merchant Marine Examination Branch, Engineering Section to make a reservation for this mode.

#### 2. TIME OF EXAMINATION AND GRADING POLICY

There is no maximum time limit on any module except as necessary to accommodate the working hours of the examination room. Applicants starting to test in the morning, at the opening of the exam room, must complete a minimum of two modules that day when two or more modules in an exam series are to be administered. If time permits, they may complete more than the required minimum of two modules. Applicants starting a module late in the afternoon should be advised that it must be completed by the normal closing time; unanswered questions will be treated as wrong answers. An applicant for a limited license must complete the entire exam on consecutive workdays. Modules should be administered in the published order. A minimum score of 70% is required to pass all modules, except for renewal modules. Renewal modules require a minimum score of 90% to pass. All modules are graded separately.

#### 3. EXAMINATION CYCLES

Subject to the requirements of paragraph 1, the examination cycle may begin on any workday, and at anytime during the day as designated by the SIP.

#### 4. MODULE FORMAT FOR UFIV ENGINEERS

Applicants for Chief Engineer Uninspected Fishing Vessels must answer all seventy (70) questions. Applicants for Assistant Engineer Uninspected Fishing Vessel must answer the first fifty (50) questions of each seventy (70) question module.

#### 5. REFERENCE MATERIAL

Applicants are permitted to use the Merchant Marine Engineering Examination Illustration Book, 46 CFR Parts 1-199 and 33 CFR Parts 1-199. These must be provided in the examination room. No other reference materials are permitted. Nonprogramable calculators are permitted.

#### 6. RENEWAL EXERCISE

The renewal exercises for Limited Chief and Assistant Engineer, Uninspected Fishing Industry Vessel Chief and Assistant Engineer, and DDE Unlimited and DDE Limited have been consolidated into one exercise.

#### 7. QUESTIONS

Any questions should be referred to Coast Guard Headquarters, Merchant Marine Examination Branch, Engineering Section, 202/267-2714.



EXAMINATION STRUCTURE GUIDELINE INDEX

FOR

LIMITED ENGINEERS HORSEPOWER/TONNAGE

| EXAM TITLE   | ESG |
|--|-----|
| Raise in Grade   |     |
| Limited Chief Engineer, Motor .....                                    | 1   |
| Limited Chief Engineer, Steam .....                                    | 2   |
| Limited Chief Engineer, Steam & Motor .....                            | 3   |
| Limited Assistant Engineer, Motor .....                                | 4   |
| Limited Assistant Engineer, Steam .....                                | 5   |
| Limited Assistant Engineer, Steam & Motor .....                        | 6   |
| Increasing the Scope   |     |
| Limited Chief or Assistant Engineer .....                              | 7   |
| Raise in Grade   |     |
| Designated Duty Engineer Unlimited Horsepower, Motor .....             | 8   |
| Designated Duty Engineer Unlimited Horsepower, Steam .....             | 9   |
| Designated Duty Engineer Unlimited Horsepower, Steam & Motor .....     | 10  |
| Designated Duty Engineer Limited Horsepower, Motor .....               | 11  |
| Designated Duty Engineer Limited Horsepower, Steam .....               | 12  |
| Designated Duty Engineer Limited Horsepower, Steam & Motor .....       | 13  |
| Increasing the Scope   |     |
| DDE Unlimited or DDE Limited, .....                                    | 14  |
| Simultaneous   |     |
| DDE Unlimited Motor and Limited Assistant Engineer Motor .....         | 15  |
| DDE Unlimited Motor and Limited Assistant Engineer Steam & Motor ..... | 16  |
| Raise in Grade   |     |
| Uninspected Fishing Industry Vessels, Chief Engineer .....             | 17  |
| Uninspected Fishing Industry Vessels, Assistant Engineer .....         | 18  |
| Crossovers   |     |
| DDE Unlimited Motor, from (Limited Assistant Engineer Motor) .....     | 19  |
| DDE Unlimited Motor, from (Limited Assistant Engineer Steam) .....     | 20  |
| DDE Unlimited Steam, from (Limited Assistant Engineer Steam) .....     | 21  |
| DDE Unlimited Steam, from (Limited Assistant Engineer Motor) .....     | 22  |
| Limited Assistant Engineer Motor, from (DDE Unlimited Motor) .....     | 23  |
| Limited Assistant Engineer Motor, from (DDE Unlimited Steam) .....     | 24  |
| Limited Assistant Engineer Steam, from (DDE Unlimited Steam) .....     | 25  |
| Limited Assistant Engineer Steam, from (DDE Unlimited Motor) .....     | 26  |
| Renewals   |     |
| Limited Lower Level Engineering, Steam and/or Motor .....              | 27  |



# QUICK REFERENCE - LIMITED ENGINEER HORSEPOWER/TONNAGE LICENSES

## CHIEF ENGINEER - LIMITED

| <u>SUBJECT</u>     | <u>MODULE<br/>CODE</u> | <u>STEAM<br/>ONLY</u> | <u>MOTOR<br/>ONLY</u> | <u>STEAM &amp;<br/>MOTOR</u> |
|--------------------|------------------------|-----------------------|-----------------------|------------------------------|
| General Subjects   | 601--                  | X                     | X                     | X                            |
| Motor Plants       | 602--                  |                       | @X                    | X                            |
| Engineering Safety | 603--                  | X                     | X                     | X                            |
| Steam Plants       | 604--                  | @X                    |                       | X                            |
| Electricity        | 605--                  | X                     | X                     | X                            |

## ASSISTANT ENGINEER - LIMITED

| <u>SUBJECT</u>     | <u>MODULE<br/>CODE</u> | <u>STEAM<br/>ONLY</u> | <u>MOTOR<br/>ONLY</u> | <u>STEAM &amp;<br/>MOTOR</u> |
|--------------------|------------------------|-----------------------|-----------------------|------------------------------|
| General Subjects   | 681--                  | X                     | X                     | X                            |
| Motor Plants       | 682--                  |                       | @X                    | X                            |
| Engineering Safety | 683--                  | X                     | X                     | X                            |
| Steam Plants       | 604--                  | @X                    |                       | X                            |

## UNINSPECTED FISHING INDUSTRY VESSEL - CHIEF ENGINEER

| <u>SUBJECT</u>     | <u>MODULE<br/>CODE</u> | <u>MOTOR</u> |
|--------------------|------------------------|--------------|
| General Subjects   | 651--                  | X            |
| Motor Plants       | 652--                  | X            |
| Engineering Safety | 653--                  | X            |

## DESIGNATED DUTY ENGINEER - UNLIMITED HORSEPOWER

| <u>SUBJECT</u>     | <u>MODULE<br/>CODE</u> | <u>STEAM<br/>ONLY</u> | <u>MOTOR<br/>ONLY</u> | <u>STEAM &amp;<br/>MOTOR</u> |
|--------------------|------------------------|-----------------------|-----------------------|------------------------------|
| General Subjects   | 681--                  | X                     | X                     | X                            |
| Motor Plants       | 682--                  |                       | @X                    | X                            |
| Engineering Safety | 683--                  | X                     | X                     | X                            |
| Steam Plants       | 604--                  | @X                    |                       | X                            |

## DESIGNATED DUTY ENGINEER - LIMITED HORSEPOWER

| <u>SUBJECT</u>     | <u>MODULE<br/>CODE</u> | <u>STEAM<br/>ONLY</u> | <u>MOTOR<br/>ONLY</u> | <u>STEAM &amp;<br/>MOTOR</u> |
|--------------------|------------------------|-----------------------|-----------------------|------------------------------|
| General Subjects   | 691--                  | X                     | X                     | X                            |
| Motor Plants       | 692--                  |                       | @X                    | X                            |
| Engineering Safety | 693--                  | X                     | X                     | X                            |
| Steam Plants       | 604--                  | *@X                   |                       | *X                           |

X Indicates a module that is part of the core exam.

@ An applicant increasing the scope of a license is only required to pass these modules.

\* Applicants only required to answer the first 50 questions.



EXAM STRUCTURE GUIDELINE #1  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Chief Engineer, Motor

NO. OF MODULES: Four (4)

MODULE PRESENTATION ORDER:

601-- , General Subjects  
602-- , Motor Plants  
603-- , Engineering Safety  
605-- , Electricity

---

EXAM STRUCTURE GUIDELINE #2  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Chief Engineer, Steam

NO. OF MODULES: Four (4)

MODULE PRESENTATION ORDER:

601-- , General Subjects  
604-- , Steam Plants  
603-- , Engineering Safety  
605-- , Electricity

---

EXAM STRUCTURE GUIDELINE #3  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Chief Engineer, Steam & Motor

NO. OF MODULES: Five (5)

MODULE PRESENTATION ORDER:

601-- , General Subjects  
602-- , Motor Plants  
604-- , Steam Plants  
603-- , Engineering Safety  
605-- , Electricity

---

EXAM STRUCTURE GUIDELINE #4  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Assistant Engineer, Motor

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

681-- , General Subjects  
682-- , Motor Plants  
683-- , Engineering Safety



EXAM STRUCTURE GUIDELINE #5  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Assistant Engineer, Steam

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER

681-- , General Subjects  
683-- , Engineering Safety  
604-- , Steam Plants

---

EXAM STRUCTURE GUIDELINE #6  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Assistant Engineer, Steam & Motor

NO. OF MODULES: Four (4)

MODULE PRESENTATION ORDER:

681-- , General Subjects  
682-- , Motor Plants  
683-- , Engineering Safety  
604-- , Steam Plants

---

EXAM STRUCTURE GUIDELINE #7  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Chief or Limited Assistant Engineer, Increasing the  
Scope

NO. OF MODULES: One (1)

MODULE PRESENTATION ORDER: Only one module is required.

Limited Chief 602-- , Motor Plants  
Limited Assistant 682-- , Motor Plants

Limited Chief 604-- , Steam Plants  
Limited Assistant 604-- , Steam Plants

REMARKS:

1. This module will be administered to a qualified applicant who already possesses a Limited Chief or Limited Assistant Engineer license in one of the propulsion modes (Motor or Steam) and desires to increase the scope of their existing steam or motor license.

2. One module of the alternate propulsion mode at the appropriate license level is required.



EXAM STRUCTURE GUIDELINE #8  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Unlimited, Motor

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

681-- , General Subjects  
682-- , Motor Plants  
683-- , Engineering Safety

---

EXAM STRUCTURE GUIDELINE #9  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Unlimited, Steam

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

681-- , General Subjects  
683-- , Engineering Safety  
604-- , Steam Plants

---

EXAM STRUCTURE GUIDELINE #10  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Unlimited, Steam & Motor

NO. OF MODULES: Four (4)

MODULE PRESENTATION ORDER:

681-- , General Subjects  
682-- , Motor Plants  
683-- , Engineering Safety  
604-- , Steam Plants

---

EXAM STRUCTURE GUIDELINE #11  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Limited, Motor

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

691-- , General Subjects  
692-- , Motor Plants  
693-- , Engineering Safety



EXAM STRUCTURE GUIDELINE #12  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Limited, Steam

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

691-- , General Subjects  
693-- , Engineering Safety  
604-- , Steam Plants\*

---

EXAM STRUCTURE GUIDELINE #13  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Limited, Steam & Motor

NO. OF MODULES: Four (4)

MODULE PRESENTATION ORDER:

691-- , General Subjects  
692-- , Motor Plants  
693-- , Engineering Safety  
604-- , Steam Plants\*

---

EXAM STRUCTURE GUIDELINE #14  
FOR  
LIMITED LICENSES

EXAM TITLE: DDE UnLimited or DDE Limited, Increasing the Scope

NO. OF MODULES: One (1)

MODULE PRESENTATION ORDER: Only one module is required

DDE Unlimited 682-- , Motor Plants  
DDE Limited 692-- , Motor Plants

DDE Unlimited 604-- , Steam Plants  
DDE Limited\* 604-- , Steam Plants

REMARKS:

1. This module is administered to an applicant holding a DDE Unlimited or DDE Limited Engineer license in one propulsion mode (Motor or Steam) who desires to increase the scope of their existing steam or motor license.

2. One module of the alternate propulsion mode at the appropriate license level is required.

\*4. Applicants must answer only the first 50 questions.



EXAM STRUCTURE GUIDELINE #15  
FOR  
LIMITED LICENSES

EXAM TITLE: Simultaneous DDE Unlimited Motor and Limited Assistant  
Engineer Motor

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

681--, General Subjects  
682--, Motor Plants  
683--, Engineering Safety

---

EXAM STRUCTURE GUIDELINE #16  
FOR  
LIMITED LICENSES

EXAM TITLE: Simultaneous DDE Unlimited Motor and Limited Assistant  
Engineer Steam & Motor

NO. OF MODULES: Four (4)

MODULE PRESENTATION ORDER:

681--, General Subjects  
682--, Motor Plants  
683--, Engineering Safety  
604--, Steam Plants



EXAM STRUCTURE GUIDELINE #17  
FOR  
LIMITED LICENSES

EXAM TITLE: Uninspected Fishing Industry Vessels, Chief Engineer

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

651-- , General Subjects  
652-- , Motor Plants  
653-- , Engineering Safety

-----  
EXAM STRUCTURE GUIDELINE #18  
FOR  
LIMITED LICENSES

EXAM TITLE: Uninspected Fishing Industry Vessels, Assistant Engineer

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

651-- , General Subjects  
652-- , Motor Plants  
653-- , Engineering Safety

REMARKS:

1. Applicants must answer only the first 50 questions.



EXAM STRUCTURE GUIDELINE #19  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Unlimited Motor, (Crossover from Limited Assistant Engineer Motor)

NO. OF MODULES: None

REMARKS:

1. The same modules are administered to a Limited Assistant Engineer Motor and Designated Duty Engineer Unlimited Motor license and requires no additional testing.

-----

EXAM STRUCTURE GUIDELINE #20  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Unlimited Motor, (Crossover from Limited Assistant Engineer Steam)

NO. OF MODULES: One (1)

MODULE PRESENTATION ORDER:

682-- , Motor Plants

REMARKS:

1. This module is administered to an applicant holding a Limited Assistant Engineer Steam license who desires a Designated Duty Engineer Unlimited Motor license.

2. This applicant upon passing the 682-- , Designated Duty Engineer Unlimited/Limited Assistant, Motor module is eligible for the Limited Assistant Engineer Steam and Motor license.

-----

EXAM STRUCTURE GUIDELINE #21  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Unlimited Steam, (Crossover from Limited Assistant Engineer Motor)

NO. OF MODULES: One (1)

MODULE PRESENTATION ORDER:

604-- , Steam Plants

REMARKS:

1. This module is administered to an applicant holding a Limited Assistant Engineer Motor license who desires a Designated Duty Engineer Unlimited Steam license.

2. This applicant upon passing the 604-- , Limited Lower Level Steam Plants module is eligible for the Limited Assistant Engineer Steam and Motor license.

3. Applicants must answer all 70 questions.



EXAM STRUCTURE GUIDELINE #22  
FOR  
LIMITED LICENSES

EXAM TITLE: Designated Duty Engineer Unlimited Steam, (Crossover from Limited Assistant Engineer Steam and Motor)

NO. OF MODULES: None (0)

REMARKS:

1. This module is administered to an applicant who already possesses a Limited Assistant Engineer Motor license who desires a Designated Duty Engineer Unlimited Steam license.

-----

EXAM STRUCTURE GUIDELINE #23  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Assistant Engineer Motor, (Crossover from DDE Unlimited Motor)

NO. OF MODULES: None

MODULE PRESENTATION ORDER:

REMARKS:

1. The same modules are administered to a Limited Assistant Engineer Motor and Designated Duty Engineer Unlimited Motor license, and requires no additional testing.

-----

EXAM STRUCTURE GUIDELINE #24  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Assistant Engineer Motor, (Crossover from DDE Unlimited Steam)

NO. OF MODULES: One (1)

MODULE PRESENTATION ORDER:

682-- , Motor Plants

REMARKS:

1. This module is administered to an applicant holding a Designated Duty Engineer Unlimited Steam license who desires a Limited Assistant Engineer Motor license.



EXAM STRUCTURE GUIDELINE #25  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Assistant Engineer Steam, (Crossover from DDE  
Unlimited Steam)

NO. OF MODULES: None (0)

REMARKS:

1. This module is administered to an applicant holding a Designated Duty Engineer Unlimited Steam license who desires a Limited Assistant Engineer Steam license.

-----

EXAM STRUCTURE GUIDELINE #26  
FOR  
LIMITED LICENSES

EXAM TITLE: Limited Assistant Engineer Steam, (Crossover from DDE  
Unlimited Motor)

NO. OF MODULES: One (1)

MODULE PRESENTATION ORDER:

604-- , Steam Plants

REMARKS:

1. This module will be administered to a qualified applicant who already possesses a Designated Duty Engineer Unlimited Motor license and desires a Limited Assistant Engineer Steam license.

2. Applicants must answer all 70 questions.



EXAM STRUCTURE GUIDELINE #27  
FOR  
LIMITED LICENSES

EXAM TITLE: RENEWAL EXERCISE - Limited Engineering Steam and/or Motor.

NO. OF MODULES: One (1); 617-- Limited Engineering Renewal Exercise.

GRADING POLICY: The minimum passing score is 90%.

REMARKS:

1. The renewal exercise is open book.
2. Limited Chief and Assistant Engineer, Uninspected Fishing Industry Vessel Chief and Assistant Engineer, and DDE Unlimited and DDE Limited applicants will use the same renewal exercise. Steam applicants will answer questions 1 through 50. Motor applicants will answer questions 1 through 30 and 51 through 70. Steam and Motor applicants will answer all 70 questions.
3. Applicants should be given one attempt to correct missed questions. If unsuccessful at obtaining a passing score after reviewing the missed questions, the applicant should be given a different version of the exercise and the process repeated.
4. If the applicant is unsuccessful at obtaining a passing score after being given the second version, the applicant should retest after three months following the payment of the applicable examination fee.
5. Limited Chief and Assistant Engineer, Uninspected Fishing Industry Vessel Chief and Assistant Engineer, and DDE Unlimited and DDE Limited applicants may complete the exercise by mail.



PART THREE

MOBILE OFFSHORE DRILLING UNIT  
ENGINEERING LICENSE EXAMINATIONS

MODU CHIEF AND ASSISTANT ENGINEERS



## INTRODUCTION - MODU EXAMINATIONS

### 1. TIME OF EXAMINATION AND GRADING POLICY

There is no maximum time limit on any module except as necessary to accommodate the working hours of the examination room. Applicants starting to test in the morning, at the opening of the exam room, must complete a minimum of two modules that day and may complete more if they desire and time permits. Applicants starting a module late in the afternoon should be advised that it must be completed by the normal closing time; unanswered questions will be treated as wrong answers. An applicant for a MODU engineer's license must complete the entire exam on consecutive days within the week it is started. Modules should be administered in the published order. A minimum score of 70% is required to pass all modules, except for the renewal module. The renewal module required a minimum score of 90% to pass. All modules are graded separately.

### 2. EXAMINATION CYCLES

Subject to the requirements of paragraph 1, the examination cycle may begin on any workday, and at anytime during the day as designated by the SIP.

### 3. MODULE FORMAT FOR MODU ENGINEERS

Applicants for Chief Engineer, Mobile Offshore Drilling Units must answer all seventy (70) questions. Applicants for Assistant Engineer, Mobile Offshore Drilling Units must answer the first fifty (50) questions of each seventy (70) question module.

### 4. REFERENCE MATERIAL

Candidates are permitted to use the Merchant Marine Engineering Examination Illustration Book, 46 CFR Parts 1-199 and 33 CFR Parts 1-199 provided in the examination room. No other reference materials are permitted.

### 5. QUESTIONS

Any questions should be referred to Coast Guard Headquarters, Merchant Marine Examination Branch, Engineering Section, 202/267-2714.



EXAM STRUCTURE GUIDELINE #1  
FOR  
MODU LICENSES

EXAM TITLE: Chief Engineer, MODU

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

621-- , General Subjects  
622-- , Auxiliary Machinery  
623-- , Engineering Safety

REMARKS:

1. Applicants must answer all 70 questions.
- 

EXAM STRUCTURE GUIDELINE #2  
FOR  
MODU LICENSES

EXAM TITLE: Assistant Engineer, MODU

NO. OF MODULES: Three (3)

MODULE PRESENTATION ORDER:

621-- , General Subjects  
622-- , Auxiliary Machinery  
623-- , Engineering Safety

REMARKS:

1. Applicants are only required to answer first 50 questions.



EXAM STRUCTURE GUIDELINE #3  
FOR  
MODU LICENSES

EXAM TITLE:      Renewal Exercise for Chief and Assistant Engineers, MODU

NO. OF MODULES:   One (1)

MODULE PRESENTATION ORDER:

634-- , MODU Engineer,   Renewal Exercise

GRADING POLICY:   The minimum passing score is 90%.

REMARKS:

1.   The renewal exercise is "open book."
2.   Both MODU Chief and Assistant Engineer will use the same renewal exercise and answer questions 1 through 50.
3.   Applicants should be given one attempt to correct missed questions. If unsuccessful at obtaining a passing score after reviewing the missed questions, the applicant should be given a different version of the test and the process repeated.
4.   If the applicant is unsuccessful at obtaining a passing score after being given the second version, the applicant should retest after three months following the applicable examination fee.
5.   A MODU Engineer applicant may complete the examination by mail.



## PART FOUR

# UNLICENSED RATINGS ENGINEERING EXAMINATIONS

GENERAL SAFETY

JUNIOR ENGINEER

DECK ENGINEER

ELECTRICIAN

REFRIGERATING ENGINEER

MACHINIST

OILER

FIREMAN/WATERTENDER

PUMPMAN

OILER, MINERAL & OIL

QMED RENEWAL EXERCISE



## INTRODUCTION

### UNLICENSED ENGINEERING RATING EXAMINATIONS

#### 1. TIME OF EXAMINATION AND GRADING POLICY

There is no maximum time limit on any module except as necessary to accommodate the working hours of the examination room. Applicants may complete more than two modules in one workday if they desire and time permits. Applicants starting a module late in the afternoon should be advised that it must be completed by the normal closing time; unanswered questions will be treated as wrong answers. An applicant must complete all exam modules for the endorsements applied within one year. A minimum score of 70% is required to pass all modules. All modules are graded separately. The General Safety module must be successfully completed as a requirement to obtain any specific endorsement.

#### 2. EXAMINATION CYCLES

Subject to the requirements of paragraph 1, the examination cycle may begin on any workday, and at anytime during the day as designated by the SIP.

#### 3. REFERENCE MATERIAL

Applicants are permitted to use the Merchant Marine Engineering Examination Illustration Book, 46 CFR Parts 1-199 and 33 CFR Parts 1-199. These must be provided in the examination room. No other reference materials are permitted.

#### 4. QUESTIONS

Any questions should be referred to Coast Guard Headquarters, Merchant Marine Examination Branch, Engineering Section, 202/267-2714.



UNLICENSED ENGINEERING RATINGS  
MODULES NECESSARY FOR THE UNLICENSED ENGINEERING RATING EXAMINATIONS

| Rating                 | *General<br>Safety | Required**<br>Module |
|------------------------|--------------------|----------------------|
| Junior Engineer        | 80---              | 81---                |
| Deck Engineer          | 80---              | 82---                |
| Electrician            | 80---              | 83---                |
| Refrigerating Engineer | 80---              | 84---                |
| Machinist              | 80---              | 85---                |
| Fireman/Watertender    | 80---              | 86---                |
| Oiler                  | 80---              | 87---                |
| Pumpman                | 80---              | 88---                |
| Oiler, Mineral & Oil   | 80---              | 89---                |
| QMED Renewal Exercise  | 80---              | 90---                |

\* Not required if applicant has passed the General Safety module within the past 12 months.

\*\* A qualified applicant may take a single or a combination of modules.

The QMED Renewal Exercises (90XXX) will be made available when the final rule is placed into effect. This 70 question module will only be used for QMED renewal for those who have not acquired one year of sea service in the past five years.





